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(54) **MULTILAYER COMPOSITE FOR REVERSIBLE SORPTION OF MERCURY AND METHOD FOR SORPTION AND DESORPTION OF MERCURY FROM A GASEOUS PHASE**

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See application file for complete search history.

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(57) **ABSTRACT**

A multilayer composite for reversible sorption of mercury, with a carrier core made of a metal or an alloy based on transition metals, has isolating layers of a transition metal nitride and externally located sorptive layers, made of a mixture of sulfides and nitrides of transition metals, the layers being deposited on both sides of the core. A method for sorption of mercury from a gaseous phase during an exposition of the multilayer composite to the influence of multicomponent gaseous mixtures that contain mercury vapors or compounds for a time period of 0.5 to 24 hours, while the temperature of the multilayer composite is maintained in the range from 20 to 150° C.

11 Claims, No Drawings